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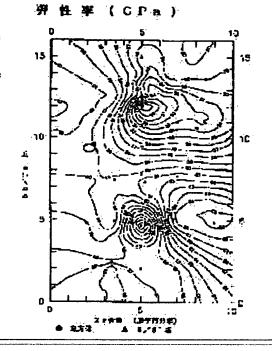
## (54) MEDICAL DEVICES MADE OF BIOCOMPATIBLE TITANIUM BASE ALLOYS

(57)Abstract:

PROBLEM TO BE SOLVED: To provide medical devices made of biocompatible titanium base alloys, which are intended to remain on or in a living human being for an extended period of time, such as surgical and

medical implants.

SOLUTION: The medical devices are made of quaternary alloys of Ti free from toxic elements such as Al, Ni, Co, Fe, Cr, Mo and W, with between about 2.5% up to 13% Zr, about 20% to about 40% Nb, about 4.5% to about 25% Ta, all percentages being by weight, the balance being Ti and the total of Ta plus Nb being between about 35% and 52% by weight. The rati n of Nb/Ta is between 2 and 13. The relative proportions of Ti, Zr, Ta and Nb are such that the modulus of elasticity is below 65 GPa. These alloys may also contain limited amount of non-toxic interstitial el ments, such as C, N and O.



## **LEGAL STATUS**

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